

ABSTRACT.

We propose to measure the asymmetry of the $d(\gamma, p)n$ reaction in the photon energy range $E_\gamma = 0.6 - 2.0$ GeV. These measurements allow one to study the validity of existing nuclear-physics models in high energy region, the non-nucleonic degrees of freedom and multi-quark configurations in the deuteron and the deuteron wave function at small distances. Experimental results will give the possibility to check the existence of the asymptotic scaling phenomenon in the deuteron photodisintegration reaction at high energies.

The experiment will become a constituent of the complex studies of the $d(\gamma, p)n$ reaction that has been suggested at CEBAF [1].